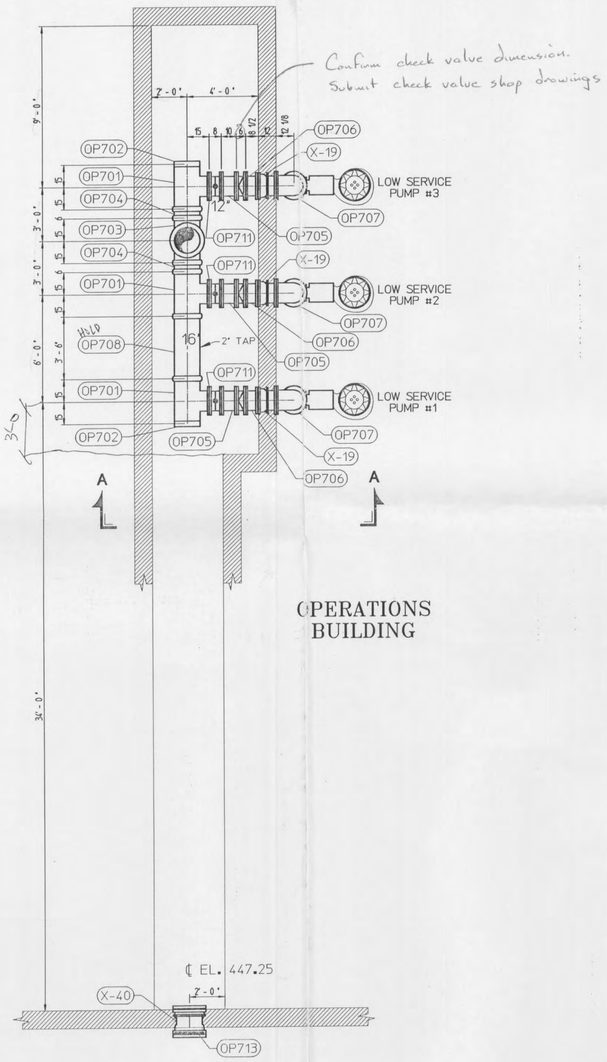
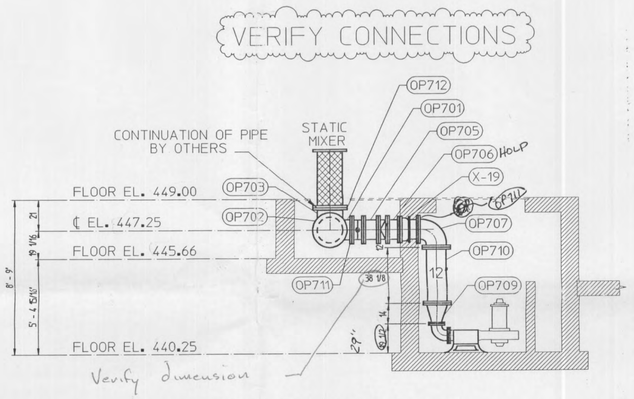
12" & 16" LOW SERVICE PUMP DISCHARGE





SECTION A–A
TYP. OF THREE

Boundary ID: ASP-ASP
Boundary name: ASP-ASP
Boundary unit: I
Service type: PROCESS
Service temp: 50
Environment: EXT/BURIED

Pipe lining: Asphaltic Lined: Black, 1-Coat, 3-Avg, 1-Min
Pipe coating: Asphaltic Coated: Black, 1-Coat, 3-Avg, 1-Min
Fitting lining: Asphaltic Lined: Black, 1-Coat, 3-Avg, 1-Min
Fitting coating: Asphaltic Coated: Black, 1-Coat, 3-Avg, 1-Min

Gasket types

FASTITE - Fastite Gasket, Plain Rubber Styrene-Butadiene
FLEX-RING 4-12 - Fastite Gasket, Plain Rubber Styrene-Butadiene
FLG LESS ACCESSORIES - none
FRBELL FLEX-RING - Fastite Gasket, Plain Rubber Styrene-Butadiene
MJ - Mechanical Joint Gasket, Plain Rubber Styrene-Butadiene
RIGID GROOV LESS ACC - none

Approved As Noted
TM 10/18/02

Release All Items
Not Marked Hold

NOTE: PLEASE VERIFY ALL VALVE DIMENSIONS.
GASKETS BETWEEN FLANGE FACES ARE 1/8" THICK.

SPECIAL DIMENSIONS

Scaled dimensions have been estimated. Pipe lengths and fitting locations on this drawing are based on these estimated lengths. Please supply and/or verify these dimensions prior to ordering pipe material.

Third Party Products

Third party products such as, but not limited to, EBAA Iron Megalugs, Dresser couplings, etc. are not within the scope of the American warranty agreement. Application and compatibility information is available from these individual companies.

BILL OF MATERIAL

Project Number KM001998 — Drawing Rev. 0 — Dr[illegible] C02070-OP7

QTY	SPBID	MARK	DESCRIPTION
3	CL-PRE cn	OP701	16"X16"X12" VGER C110 TEE, ALL CENTERS 15", 250 PSI (IN1130779:
			4-F-5-5/C
2	ASP-PRE cn	OP702	16" VGER DISHED CAP, 250 PSI (IN1130779), TNEMEC 140-1211 EPO:
			SPIGOT END, 1-G-6-6/C
1	CL-PRE cn	OP703	16"X16"X16" VGER C110 TEE, ALL CENTERS 15", 250 PSI (IN1130779:
			4-F-5-5/C
2	CL-PRE	OP704	16" VGER VGER PIPE CL-53 0.43" 6', 2-F-5-5
3	CL-PRE	OP705	12" FLG FLG PIPE CL-53 0.4" 10', 2-F
3	CL-PRE	OP706	12" FLG PE PIPE CL-53 0.4" 11', 2-F-5-5
3	CL-PRE d	OP707	12" ~~CLOSE~~ C110-SR 90 BEND, ALL CENTERS 12", 250 PSI, USA (D), 4-
1	CL-PRE	OP708	16" VGER VGER PIPE CL-53 0.43" 3'6", W/2" NPT TAP, 19" FROM
			& 0 DEG FROM TDC, 2-F-5-5
3	CL-PRE d	OP709	~~REDUCER~~ C110-CC REDUCER 12", 250 PSI, USA (D), 4-G
3	CL-PRE	OP710	12" ~~SLIP FIT~~ PIPE CL-53 0.4" 3'2-1/8", 2-F
2	CL-PRE	OP711	KIT 12 ST341 VIC FLANGE-ADAPTER INCLUDING NBR GASKET & CC
			GITNEMEC 140-1211 EP)
1	CL-PRE	OP712	KIT 16 ST341 VIC FLANGE-ADAPTER INCLUDING NBR GASKET & CC
			GITNEMEC 140-1211 EP)
1	ASP-ASP	OP713	16" MJPE C153 DISHED PLUG, 350 PSI (P), 1-2-2-2
1	CL-ASP	** X-19	12" MJ TAPPED FOR STUDS DWG Pa00097 FLG TAPPED FOR ST
			Pa00089 PIPE CL-53 0.4" 10" OVERALL (9-1/2"LL), W/STL COLLA
			FROM FLG, 2-2-2-2/N
1	CL-ASP	** X-40	16" MJ TAPPED FOR STUDS DWG Pa00097 MJ-FAB TAPPED FOR
			Pa00097 PIPE CL-53 0.43" 1'4" OVERALL (8-1/2"LL), W/STL COLL
			FROM MJ-FAB FACE, 2-2-2-2/N

** - Indicates the item has been placed on order.

SPECIFICATION BOUNDARY DEFINITIONS

Boundary ID: CL-PRE d
Boundary name: 12" & Less Domestic
Boundary unit: D
Service type: PROCESS
Service temp: 50
Environment: EXT/BURIED

Pipe lining: Single Thick C/L with Seal Coat: Black, 1-Coat, AWWA C104
Pipe coating: Tnemec 140-1211 Epoxy: Red Oxid, 1-Coats, 4-Avg, 3-Min
Fitting lining: Double Thick C/L with Seal Coat: Black, 1-Coat, AWWA C104
Fitting coating: Tnemec 140-1211 Epoxy: Red Oxid, 1-Coats, 4-Avg, 3-Min

Gasket types

COUPLING GLAND - none
FASTITE - Fastite Gasket, Plain Rubber Styrene-Butadiene
FLEX-RING 4-12 - Fastite Gasket, Plain Rubber Styrene-Butadiene
FLG LESS ACCESSORIES - none
FRBELL FLEX-RING - Fastite Gasket, Plain Rubber Styrene-Butadiene
MJ - Mechanical Joint Gasket, Plain Rubber Styrene-Butadiene
RIGID GROOV LESS ACC - none

Boundary ID: CL-PRE cn
Boundary name: 14" - 24" Domestic
Boundary unit: I
Service type: PROCESS
Service temp: 50
Environment: EXT/BURIED

Pipe lining: Single Thick C/L with Seal Coat: Black, 1-Coat, AWWA C104
Pipe coating: Tnemec 140-1211 Epoxy: Red Oxid, 1-Coats, 4-Avg, 3-Min
Fitting lining: Double Thick C/L with Seal Coat: Black, 1-Coat, AWWA C104
Fitting coating: Tnemec 140-1211 Epoxy: Red Oxid, 1-Coats, 4-Avg, 3-Min

Gasket types

COUPLING GLAND - none
FASTITE - Fastite Gasket, Plain Rubber Styrene-Butadiene
FLEX-RING 4-12 - Fastite Gasket, Plain Rubber Styrene-Butadiene
FLG LESS ACCESSORIES - none
FRBELL FLEX-RING - Fastite Gasket, Plain Rubber Styrene-Butadiene
MJ - Mechanical Joint Gasket, Plain Rubber Styrene-Butadiene
RIGID GROOV LESS ACC - none

Boundary ID: CL-PRE
Boundary name: CL-PRE
Boundary unit: I
Service type: PROCESS
Service temp: 50
Environment: EXT/BURIED

Pipe lining: Single Thick C/L with Seal Coat: Black, 1-Coat, AWWA C104
Pipe coating: Tnemec 140-1211 Epoxy: Red Oxid, 1-Coats, 4-Avg, 3-Min
Fitting lining: Double Thick C/L with Seal Coat: Black, 1-Coat, AWWA C104
Fitting coating: Tnemec 140-1211 Epoxy: Red Oxid, 1-Coats, 4-Avg, 3-Min

Gasket types

COUPLING GLAND - none
FASTITE - Fastite Gasket, Plain Rubber Styrene-Butadiene
FLEX-RING 4-12 - Fastite Gasket, Plain Rubber Styrene-Butadiene
FLG LESS ACCESSORIES - none
FRBELL FLEX-RING - Fastite Gasket, Plain Rubber Styrene-Butadiene
MJ - Mechanical Joint Gasket, Plain Rubber Styrene-Butadiene
RIGID GROOV LESS ACC - none

Boundary ID: CL-ASP
Boundary name: CL-ASP
Boundary unit: I
Service type: PROCESS
Service temp: 50
Environment: EXT/BURIED

Pipe lining: Single Thick C/L with Seal Coat: Black, 1-Coat, AWWA C104
Pipe coating: Asphaltic Coated: Black, 1-Coat, 3-Avg, 1-Min
Fitting lining: Double Thick C/L with Seal Coat: Black, 1-Coat, AWWA C104
Fitting coating: Asphaltic Coated: Black, 1-Coat, 3-Avg, 1-Min

Gasket types

FASTITE - Fastite Gasket, Plain Rubber Styrene-Butadiene
FLEX-RING 4-12 - Fastite Gasket, Plain Rubber Styrene-Butadiene
FLG LESS ACCESSORIES - none
FRBELL FLEX-RING - Fastite Gasket, Plain Rubber Styrene-Butadiene
GAGE FOR DRESSER - none
MJ - Mechanical Joint Gasket, Plain Rubber Styrene-Butadiene
RIGID GROOV LESS ACC - none

Boundary ID: ASP-PRE cn
Boundary name: 14" - 24" Domestic
Boundary unit: I
Service type: PROCESS
Service temp: 50
Environment: EXT/BURIED

Pipe lining: Asphaltic Lined: Black, 1-Coat, 3-Avg, 1-Min
Pipe coating: Tnemec 140-1211 Epoxy: Red Oxid, 1-Coats, 4-Avg, 3-Min
Fitting lining: Asphaltic Lined: Black, 1-Coat, 3-Avg, 1-Min
Fitting coating: Tnemec 140-1211 Epoxy: Red Oxid, 1-Coats, 4-Avg, 3-Min

Gasket types

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FLG LESS ACCESSORIES - none
FRBELL FLEX-RING - Fastite Gasket, Plain Rubber Styrene-Butadiene
MJ - Mechanical Joint Gasket, Plain Rubber Styrene-Butadiene
RIGID GROOV LESS ACC - none

NO EXCEPTIONS NOTED
X EXCEPTIONS NOTED
RETURNED FOR CORRECTION
RECORD COPY
NOT ACCEPTABLE

NOV 05 2002

REVIEW DOES NOT RELIEVE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS, OMISSIONS, OR DEVIATIONS FROM CONTRACT REQUIREMENTS.

BLACK & VEATCH

This drawing has been reviewed and found in general conformance with the contract documents.
APPROVED AS NOTED
REVISE AND RESUBMIT
NO CONSTRUCTION CS
SPEC SECTION 15041
DATE 10/29/02

AMERICAN DUCTILE IRON PIPE
A DIVISION OF AMERICAN CAST IRON PIPE COMPA[illegible]
PHONE: 1-800-442-2347 FAX: 1-800-442-2348
P O BOX 2727 BIRMINGHAM, ALABAMA 35202
2916 16th STREET NO[illegible] BIRMINGHAM, ALABAMA

4"-64" Diameter Ductile Iron Pipe - Fastite Joint, Mechanical Joint, Flanged
Flex-Ring Restrained Joint, Lok-Ring Restrained Joint, Flex-Lok Restrained
ANSI A21.10, A21.53, & AMERICAN Standard Fittings
ANSI A21.4 Cement lining, POLYBOND Lining, plus Special Coatings & Lini[illegible]
American Flow Control - Valves And Hydrants

This drawing is a service to the customer as an aid in developing a detailed bill of material. The p[illegible] must verify correctness of design and dimensions. It is the responsibility of the purchaser to verify all details [illegible] of prints. Changes desired shall be noted on a print and returned to American. Drawings will be revised per [illegible] changes. Drawings returned to American without signature or initial will be considered to have been reviewed by the c[illegible] of any requested change noted.

REVISED BY:	DATE:	REV #

CONDAIRE, INCORPORATED

WATER TREATMENT FACILITIES
O FALLON, MO

12"&16" LOW SERVICE PUMP DISCHARGE

REF. DWGS. D3 & D5

DRAWN BY: Daniel Jones
DATE DRAWN: 30Sep2002
SCALE: NTS
PROJECT NUMBER: KM001998
C02070-OP7